

## **REMARKS**

Entry of the above amendment and reconsideration of the above-referenced application in view of the above amendment, and of the following remarks, is respectfully requested.

Claims 1-8 and 16-20 are pending in this case. Claim 1 is amended herein.

The Examiner rejected claims 1, 2, 4, 5, 7, 16-20 under 35 U.S.C. § 103(a) as being unpatentable over Seamons et al. (U.S. Patent 6,060,397) in view of Law et al. (U.S. Patent 4,960,488).

Applicant respectfully submits that claim 1 is patentable over Seamons in view of Law as there is no disclosure or suggestion in the references of, in a process for cleaning a deposition chamber, a first cleaning step that includes maintaining a deposition chamber having multiple substrate stations at a first pressure while passing a fluorocarbon gas into said deposition chamber; a second cleaning step that includes maintaining the deposition chamber having multiple substrate stations at a second pressure while passing the fluorocarbon gas into the deposition chamber; and a third cleaning step that includes maintaining the deposition chamber having multiple substrate stations at a third pressure less than the first and second pressures while passing the fluorocarbon gas into said deposition chamber.

Claim 1 requires "multiple substrate stations" in the body of the claim, not merely in the preamble. Both Seamons and Law teach single wafer processing tools, rather than batch or multiple wafer processing tools. Paragraph [0005] of the instant specification specifically discusses a solution similar to Law in which a single wafer chamber clean is performed after each deposition and how this is unsuitable for a multiple substrate tool. Thus, it would not be obvious to one of ordinary skill in the art to apply the clean process of Law for a single wafer tool to a multiple wafer tool.

Furthermore, Seamons and Law both teach 1 and 2 steps cleaning processes. There is no disclosure or suggestion of a 3 step cleaning process as claimed. Similar to that discussed in the background of the instant specification, Law teaches a process in which a clean process is performed after each deposition step. Performing a one-step clean at a given interval with intervening deposition processes is not equivalent to, and does not suggest, a cleaning process that comprises first, second, and third cleaning steps. Law merely teaches performing a one step clean more often and occasionally combining the one step clean with a second step. The references alone or in combination do not disclose or suggest a cleaning process that comprises first, second, and third cleaning steps as claimed. Accordingly, Applicant respectfully submits that claim 1 and the claims dependent thereon are patentable over the references.

Applicant respectfully submits that claim 16 is patentable over the references as there is no disclosure or suggestion in the references of transferring a plurality of substrates into a deposition chamber having multiple substrate stations contained therein and depositing material layers on the substrates and cleaning the deposition chamber using an *in situ* cleaning process when deposits in said deposition chamber reaches a predefined thickness, wherein the *in situ* cleaning process comprises a first cleaning step, a second cleaning step, and a third cleaning step. Seamons and Laws merely teach 1 and 2 step cleaning processes. No 3 step cleaning processes are taught. As discussed above, Law teaches a process in which a clean process is performed after each deposition step. Performing a one-step clean at given intervals is not equivalent to, and does not suggest, an in-situ cleaning process performed when deposits reach a predefined thickness that comprises first, second, and third cleaning steps. Law merely teaches performing a first step more often and occasionally combining the first step with a second step. The references alone or in combination do not disclose or suggest an in-situ cleaning process performed when deposits reach a predefined thickness that comprises first, second, and third cleaning steps.

Furthermore, while Laws teaches performing the one step clean after each deposition, the one step cleans are performed prior to deposits reaching a predefined

thickness. Once the predefined thickness in Laws is reached, only the two step process is performed in contrast to a one-step and then two step process as argued by the Examiner. Accordingly, Applicant respectfully submits that claim 16 and the claims dependent thereon are patentable over the references.

The Examiner rejected claims 3 and 8 under 35 U.S.C. § 103(a) as being unpatentable over Seamons et al. (U.S. Patent 6,060,397) in view of Law et al. (U.S. Patent 4,960,488) and further in view of Richardson et al. (U.S. Patent 7,028,696).

Applicant respectfully submits that claims 3 and 8 are patentable over the references for the same reasons discussed above relative to claim 1 from which they depend.

The Examiner rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Seamons et al. (U.S. Patent 6,060,397) in view of Law et al. (U.S. Patent 4,960,488) and in further view of Cheung et al. (U.S. Patent 5,158,644).

Applicant respectfully submits that dependent claim 6 is patentable over the references for the same reasons discussed above relative to claim 1 from which claim 6 depends.

In light of the above, Applicant respectfully requests withdrawal of the Examiner's rejections and allowance of claims 1-8 and 16-20. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

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